**IT Applications, Unit 4**

**Ch 4, Organisations and information needs, p 129-136**

What is an information system?

1. Define an information system.

An information system is a group of components that work together, it can be as simple as processing and assembling a hamburger at a fast food outlet or as complex as launching a space shuttle.

1. List the 4 components of an information system.

* Equipment (the software and hardware)
* Data (to be manipulated)
* Personnel (to oversee the running of the system)
* Procedures (to ensure that data is manipulated in an efficient manner)

**Components of an information system**, p 131

**Equipment**

**1 Software**

Elaborate under each of the following four main types of software.

1. Operation or system software

Operations software controls the actual operations of the computer and hardware. A computer system that did not have an operating system would not be able to run applications. The operating system not only starts the computer, executes and stores application programs, stores and retrieves files, and performs services but also configures devices

1. Application software

Application software provides support to the computer users. Application software can include word processing programs, spreadsheets and databases, application software can also be custom-made for a particular need in an organisation.

1. Utility software

Utility software is system software that that performs a particular task. Most operating systems include utility programs that perform tasks such as diagnosing problems, scanning disks and defragmenting disks.

1. Programming software

A programming language is a set of words and/or codes that allows a programmer to communicate instructions to a computer. Some examples of these languages are Delphi, Visual Basic C++, Hypertalk, HTML (hypertext markup language), PHP, and Java.

**2 Hardware**

a. List the 5 core components of a pc.

* CPU or system unit
* Hard disk
* Monitor
* Keyboard
* Mouse

**3 Data**

1. Describe the nature of data.

When data is entered into a computer it is raw and unorganised. It might be entered as numbers, letters, words, images or sounds. For data to become meaningful it has to be processed or manipulated.

**4 Personnel**

1. Who are the personnel in organisations?

The personnel in an organisation are paramount to the success of an information system. The personnel are known as users, this term can include people like managers, technicians, sales representatives and customers.

**5 Procedures**

1. What is the purpose of procedures?

Procedures are a set of steps that are followed. There purpose is to ensure that tasks are performed uniformly and consistently. Procedures describe the tasks that users, ICT personnel and managers perform in relation to the information system (these tasks can include backing up data, adding a new account for a customer or checking back-up data files every morning).

**Information characteristics in organisations,** p 133

**Information flow**

1. What is meant by information flow?

Information flow is the efficient flow of information within an organisation. The information has to flow between the four hierarchy levels within an organisation for it to function efficiently.

1. List the four hierarchy levels within a large organisation and the people who are at each of these levels.

* Senior management; for example the chief executive officer
* Middle management; for example the director or manager
* Operational management; for example the supervisor, team leader or the area coordinator
* Operational workers; computer operators, receptionists, factory workers, sales representatives, production workers, team members, administration assistants, technical support or clerks

**Structure of information, p 134**

Describe the following categories or structures of information and which hierarchy level uses the information.

1. Detail reports

Detail reports involve the communication of all the assembled records. One line of the detail report is assigned to each record. For example, an IT student who wanted to know the result off their recent assessment might be provided with a detail report with a comment that includes a comment on each of the criteria, the average class mark, the percentage and a weighting in relation to the other assessment tasks during the year.

1. Summary reports

Summary reports are a brief version of the detail report that use the totals and averages rather than reporting on the individual items., this type of report are often used by middle and senior management to gain an understanding of what is happening at the operation management level.

1. Aggregate reports

Aggregate reports are similar to detail reports, but they only relate to one particular factor or subject. If middle management want6s to find out the sales record of a particular product over the last two years it would use the aggregated sales report for that product.

1. Sample reports

Sampled information is a section of detailed information that provides senior management with an idea of the overall situation. Taking a sample of the detailed information means managers do not need to wade through what is often irrelevant material.

1. Exception reports.

An exception report identifies data that shows a variation from the set or target result, and helps managers identify situations that require action.

**Decision-making in organisations, p 135**

Under each of the following levels of management describe the characteristics of decision making made, strategic, tactical, operational and day-to-day decisions.

1. Decision-making by senior management

Strategic decisions can involve very complicated problems that relate to the long-term goals of an organisation. They can take senior management years to make. Strategic decisions-making often involves studying market trends, choosing new products to manufacture or market, analysing social, legal and environment concerns, determining site locations and adjusting management structure.

1. Decision-making by middle management

Middle management makes tactical decisions to solve problems that affect the running the organisation. The managers of each department within the organisation are responsible for the running of their own department, whether it be human resources, sales, marketing, accounts or information and communications technology. They are also responsible for making sure that the strategic decisions made by senior management are successfully carried out.

1. Decision-making by operational management.

Operational workers are the supervisors of the workers. They deal with day-to-day operational decisions. They make decisions on the spot but there decisions shouldn’t have a lasting effect.

1. Decision-making by operational workers

The workers at the operation level also make day-to-day decisions that help the efficient runny of a business. The workers are usually the first point of contact with the public. These are also short-term decisions that usually have very little bearing on the overall success of the business.